

been an extensive one—involving removal of a relatively large slice of skin by the bite of some predator. Such an injury would almost certainly prove fatal as serpents do not recover readily on account of the slow rate of tissue growth, which leaves ample time for attack by parasites, e.g. maggots, or by ants.

Assuming, therefore, that injury had not occurred, we must fall back on the hypothesis of congenital abnormality. This is supported by the scale arrangement. At both extremities of the elliptical abnormal area are transversely disposed ventral scales of transitional size and shape. These are succeeded by small scales arranged in rather irregular transverse rows linking up on each side with normal dorsal type scales. About 19-20 ventrals are replaced by scales of abnormal size and shape. Anteriorly, the transition is less abrupt, especially on the right where five large oblong scales occur in succession, their fellows being represented by small quadrate scales, or, more posteriorly, by oval scales showing tendency to unibrication. In the caudal half of the abnormal area, small oval or quadrate scales replace the ventrals on both sides.

I therefore now consider that the error is due to abnormal development in the embryo, due to some inhibiting factor or local change of the environment of development at the time when the ventrals are being laid down.

THE ZOOLOGICAL SOCIETY OF LONDON,
REGENT'S PARK,
LONDON, N.W. 1,
July 17, 1958.

W. C. OSMAN HILL

16. CAN SNAKES PRODUCE VOCAL SOUNDS?

Some time back the Society received the following letter from Dr. B. K. Behura, Department of Zoology, Ravenshaw College, Cuttack:

'A python (*Python molurus*) measuring about nine feet two and a half inches was kept under captivity by me at the Department of Zoology since May 1954 until its death in September 1957. On 12 April 1957 finding the water-can inside the cage of the reptile empty, I poured a glass of water into the can from above the cage, and to my surprise I heard a distinct 'Umh' resembling the sound of a man in agony. Shri U. C. Panda, a Lecturer of the Department who was standing near the cage also heard the same and we had no doubt that the sound had come from the python in the cage.

'It would be interesting to know whether other snakes also produce sound and the circumstances under which they do so.'

Not far from Bombay on 9 January 1955 I saw a large Dhaman (*Ptyas mucosus*) which, when chased, went into a hole. We caught hold of its tail and after considerable effort, which included some rough handling, pulled it out and carried it to camp where Messrs Sálím Ali and B. Biswas of the Zoological Survey of India were also present. While being carried and for some considerable time afterwards, it uttered several kinds of noises which included a low whine and variations thereon.

Upon receipt of Dr. Behura's letter I wrote to Dr. W. C. Osman Hill, Prosector, Zoological Society of London, whose reply reads in part:

'Our experience here is that no snake produces any sound other than hissing, but the quality and tone of the hiss may be altered by the presence of pathological secretions within the respiratory passages. I think this may be the case with the Python mentioned, which agrees with a record we have for a Boa. But the case of the Dhaman appears unique as this was presumably a healthy animal.

'I am told that in some travel books cases have been cited of Anacondas snoring, but this has never been confirmed by scientists.'

BOMBAY NATURAL HISTORY SOCIETY,
91 WALKESHWAR ROAD, BOMBAY 6,
September 11, 1958.

HUMAYUN ABDULALI

17. LARVAL WATER-MITES (HYDRACARINA) PARASITIC ON INSECTS, WITH NOTES ON THE DISPERSAL OF SMALL FRESHWATER INVERTEBRATES

This paper summarises the previous literature on larval water-mites parasitic on insects and gives records of my observations on this subject with a discussion of the life-history and the direct and indirect effects of the parasite on host insects. The general problem of the dispersal of small freshwater invertebrates by flying animals is reviewed.

There are many recorded instances of larval water-mites parasitising aquatic insects. The adult mites are free-living and carnivorous. They lay eggs on water plants and the six-legged larva which hatches out attaches itself to a variety of aquatic animals. Both vertebrates and invertebrates are hosts to these parasites. They have been reported on the Corixidae (water boatmen) by Soar (1901), Hungerford (1919), Pearse and Walton (1939), Griffith (1945), Lansbury (1955), and Leston (1955). I found them on the corixid species *Sigara lateralis* Leach,